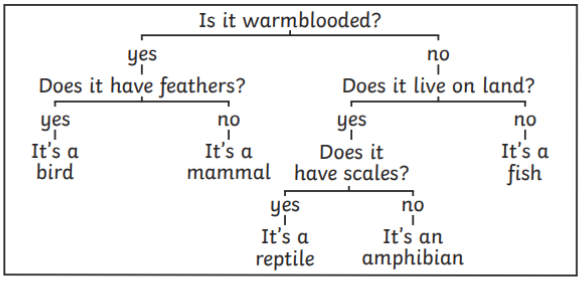
SCIENCE KNOWLEDGE ORGANISER

SHAKESPEARE CLASS - Term 3

Living Things and Their Habitats — **Year 6**

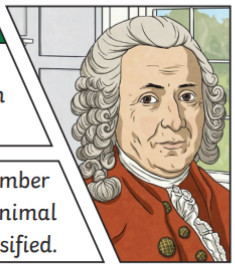
Key Vocabulary	
characteristics	Special qualities or appearances that make an individual or group of things different to others.
classify	To sort things into different groups.
taxonomist	A scientist who classifies different living things into categories.
key	A **key** is a series of questions about the **characteristics** of living things. A **key** is used to identify a living thing or decide which group it belongs to by answering 'yes' or 'no' questions.

Scientists, called Taxonomists, sort and group living things according to their similarities and differences.



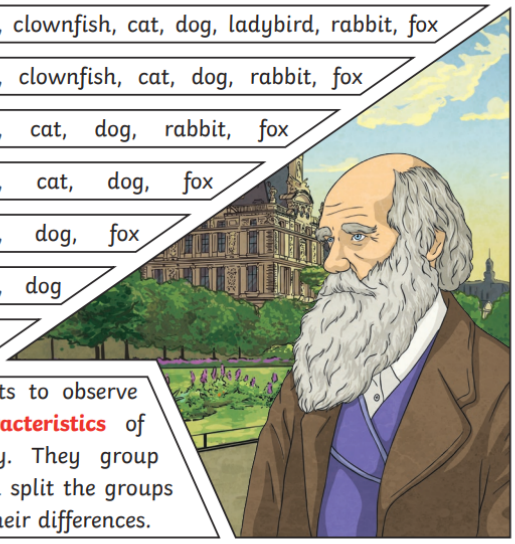
Classification

In 1735, Swedish Scientist Carl Linnaeus first published a system for **classifying** all living things. An adapted version of this system is still used today: The Linnaeus System.



Living things can be **classified** by these eight levels. The number of living things in each level gets smaller until the one animal is left in its species level. This is how a dog would be classified.

Domain: Eukarya	jackal, clownfish, cat, dog, ladybird, daisy, rabbit, fox
Kingdom: Animals	jackal, clownfish, cat, dog, ladybird, rabbit, fox
Phylum: Chorodata	jackal, clownfish, cat, dog, rabbit, fox
Class: Mammals	jackal, cat, dog, rabbit, fox
Order: Carnivore	jackal, cat, dog, fox
Family: Canidae	jackal, dog, fox
Genus: Canis	jackal, dog
Species: Lupus	dog



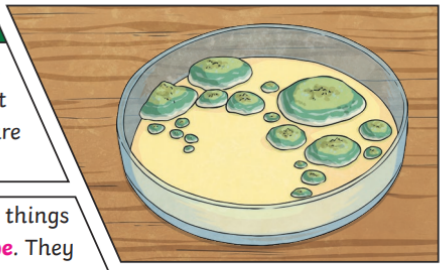
Each group allows scientists to observe and understand the **characteristics** of living things more clearly. They group similar things together then split the groups again and again based on their differences.

Key Vocabulary	
bacteria	A single-celled **microorganism**.
microorganism	An organism that can only be seen using a **microscope**, e.g. **bacteria**, mould and yeast.
microscope	A piece of equipment that is used to view very tiny (**microscopic**) things by magnifying their appearance.
species	A group of animals that can reproduce to produce fertile offspring.

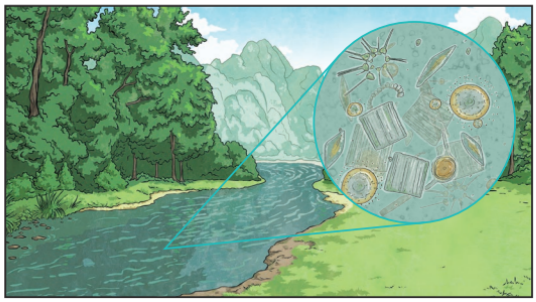
Helpful Microbes	Harmful Microbes
Bacteria – cheese	**Bacteria** – salmonella is a bacterium that can lead to food poisoning
Yeast – wine	Virus – chicken pox and flu are examples of viral diseases
Bacteria – yoghurt	Fungi – athlete's foot
Yeast – bread dough	**Bacteria** – plaque
Penicillium fungi - antibiotics	Fungi - mould

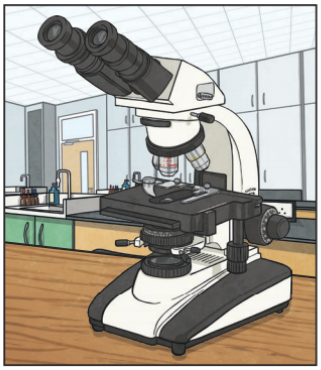
Microorganisms

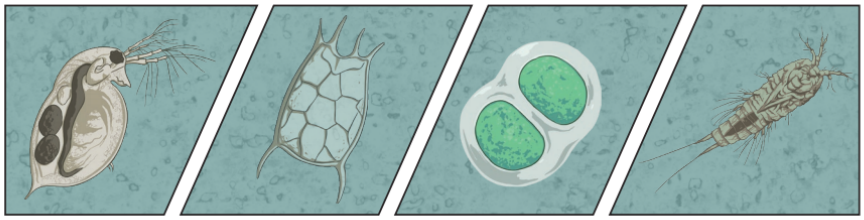
Microorganisms are viruses, **bacteria**, moulds and yeast. Some animals (dust mites) and plants (phytoplankton) are also **microorganisms**.



Microorganisms are very tiny living things that can only be seen using a **microscope**. They can be found in and on our bodies, in the air, in water and on objects around us.







LINKS TO PREVIOUS LEARNING	
Year 2	• explore and compare the differences between things that are living, dead, and things that have never been alive • identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other • identify and name a variety of plants and animals in their habitats, including micro-habitats • describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food
Year 3	• recognise that living things can be grouped in a variety of ways • explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment • recognise that environments can change and that this can sometimes pose dangers to living things
Year 4	• describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • describe the life process of reproduction in some plants and animals
Year 5	• describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals • give reasons for classifying plants and animals based on specific characteristics